

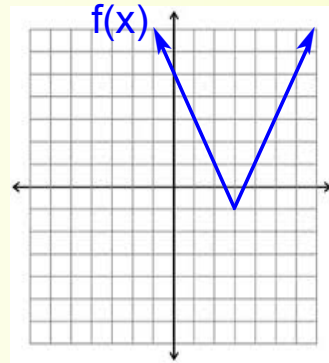
Alg. 2 Warm Up #1-2

Warm Up sheets by the door.

1. Solve:

$$x^2 + 5x - 14 > 0$$

2. Find an equation for $f(x)$



3. Graph: $y \leq f(x)$

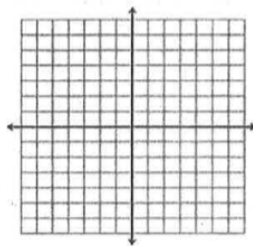
(Tan)

Alg. 2B Ch 4 homework #1

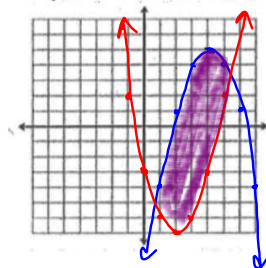
Name _____ Team _____ Per _____

1. Graph the inequality or system of inequalities. Shade the solution region.

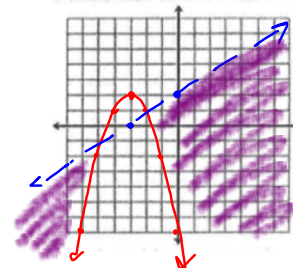
a. $y > -\frac{1}{2}x + 3$



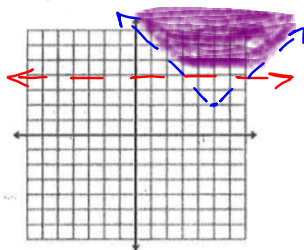
b. $y \leq -(x-4)^2 + 5$
 $y \geq (x-2)^2 - 7$



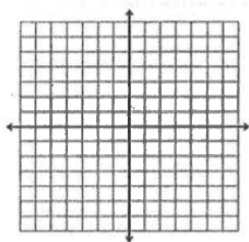
c. $y \geq -(x+3)^2 + 2$
 $2x - 3y > -6$



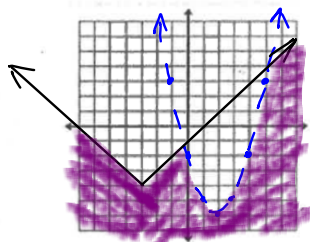
d. $y > |x - 5| + 2$
 $y > 4$



e. $y > -|x + 1| + 4$
 $y \geq \frac{1}{2}x - 2$



f. $y \leq |x + 3| - 4$
 $y < (x - 2)^2 - 6$



2. Simplify each expression.

a. $\frac{(x^3y)^{-2}}{8x^0y^{-6}}$

b. $\frac{7x^{-4}y^5}{xy^4} * \frac{(y^{-2})^{-3}}{(7x)^2}$

2. Simplify each expression.

a. $\frac{(x^3y)^{-2}}{8x^0y^{-6}}$

$$\frac{y^6}{8(x^3y)^2}$$

$$\frac{y^6}{8x^6y^2}$$

$$\boxed{\frac{y^4}{8x^6}}$$

b. $\frac{7x^{-4}y^5}{xy^4} \cdot \frac{(y^{-2})^{-3}}{(7x)^2}$

$$\frac{7y}{x^5} \cdot \frac{y^6}{74x^2}$$

$$\boxed{\frac{y^7}{7x^7}}$$

c. $\frac{36a^{-2}b^3}{a^5b^{-2}} \div \frac{4a^7}{a^{-4}b^7}$

c. $\frac{36a^{-2}b^3}{a^5b^{-2}} \div \frac{4a^7}{a^{-4}b^7}$

$$\frac{9 \cancel{36} b^3 \cdot b^2}{a^5 \cdot a^2} \cdot \frac{a^{-4} b^7}{\cancel{4} a^7}$$

$$\frac{9b^5}{a^7} \cdot \frac{b^7}{a^4 \cdot a^7}$$

$$\boxed{\frac{9b^{12}}{a^{18}}}$$

3. Find the critical numbers (boundary points) using the zero product property, then use a number line test to solve the inequality.

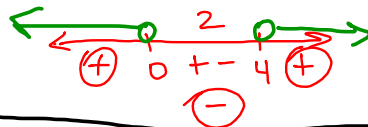
a. $2x^2 - x - 10 \leq 0$

b. $12x^2 - 48x > 0$

c. $4x^2 - 81 \geq 0$

$$12x(x-4) > 0$$

$$(2x+9)(2x-9) \geq 0$$



$$\boxed{x < 0 \text{ or } x > 4}$$

$$a^2 - b^2$$

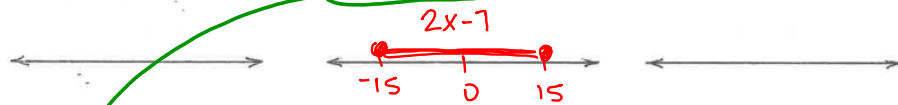
$$(a+b)(a-b)$$

4. Use the meaning of absolute value to set up each problem on a number line, then write the compound inequality and solve.

a. $|x - 5| > 12$

b. $|2x - 7| \leq 15$

c. $|3x + 2| > 10$



$$-15 \leq 2x - 7 \leq 15$$

+ 7 + 7 + 7

$$\frac{-8}{2} \leq \frac{2x}{2} \leq \frac{22}{2}$$

$$-4 \leq x \leq 11$$

4. Use the meaning of absolute value to set up each problem on a number line, then write the compound inequality and solve.

a. $|x - 5| > 12$

b. $|2x - 7| \leq 15$

c. $|3x + 2| > 10$



$$x - 5 < -12 \quad \text{or} \quad x - 5 > 12$$

$$3x + 2 < -10 \quad \text{or}$$

$$x < -7 \quad \text{or} \quad x > 17$$

$$3x + 2 > 10$$

5. At a college bookstore, Carla purchased a math textbook and a novel that cost a total of \$54. If the price of the math textbook is \$8 more than 3 times the price of the novel, what is the price of each book? Specifically identify the variables, write a system of equations then solve.

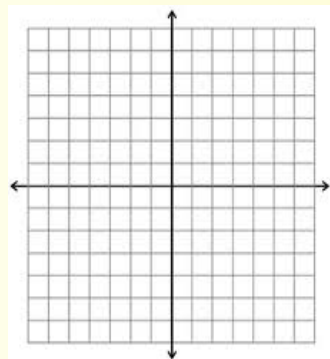
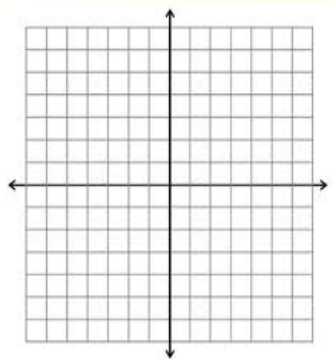
Let m = The price in \$ of a math textbook

Let n = The price in \$ of a novel

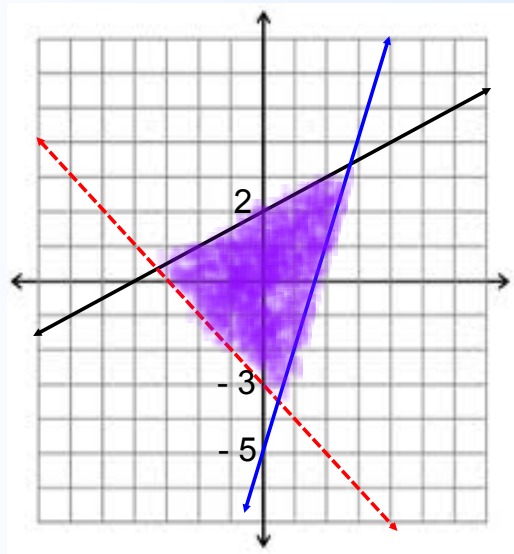
$$\begin{cases} m + n = 54 \\ m = 8 + 3n \end{cases}$$



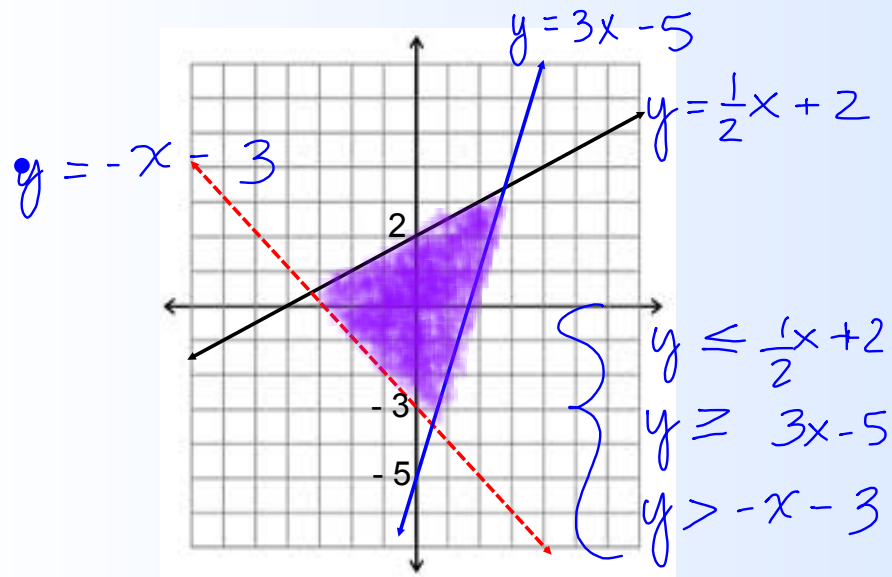
Questions Yellow Classwork:



Write a system of inequalities for the region represented:



Write a system of inequalities for the region represented:



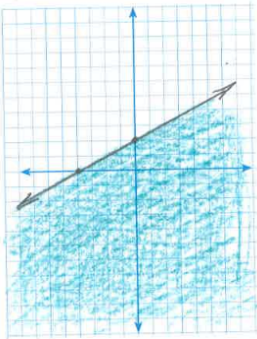
Today's Classwork: (green)

Alg 2B Classwork

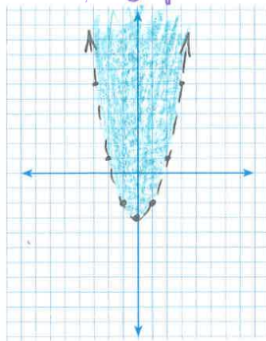
Name _____

Write an inequality for each graph. Team _____ Per. _____

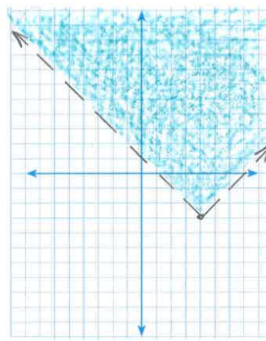
1.



2.

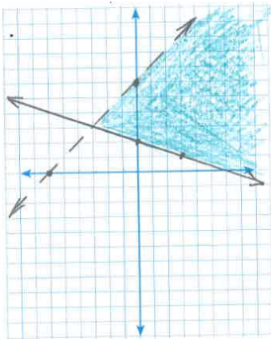


3.

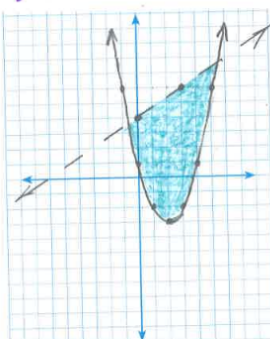


Write a system of inequalities for each graph.

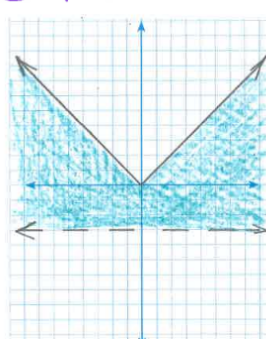
4.



5.



6.



Your website:

Go to South web page,
Faculty Sites, Math,
Nicholson

Alg 2 ebook:

<http://enroll.cpm.org>
2NJMC

Do you have a book?

Core Connections
Algebra 2, Volume **One**

HW: Ch 4 Homework WS #2 (Purple)

* First Short Quiz: Friday

Includes: Solving a quadratic inequality and
an absolute value inequality